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OMICS Group is an amalgamation of Open Access publications and worldwide international science conferences and events. Established in the year 2007 with the sole aim of making the information on Sciences and technology 'Open Access', OMICS Group publishes 500 online open access scholarly journals in all aspects of Science, Engineering, Management and Technology journals. OMICS Group has been instrumental in taking the knowledge on Science & technology to the doorsteps of ordinary men and women. Research Scholars, Students, Libraries, Educational Institutions, Research centers and the industry are main stakeholders that benefitted greatly from this knowledge dissemination. OMICS Group also organizes 500 International conferences annually across the globe, where knowledge transfer takes place through debates, round table discussions, poster presentations, workshops, symposia and exhibitions.

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OMICS International is a pioneer and leading science event organizer, which publishes around 500 open access journals and conducts over 500 Medical, Clinical, Engineering, Life Sciences, Pharma scientific conferences all over the globe annually with the support of more than 1000 scientific associations and 30,000 editorial board members and 3.5 million followers to its credit.

OMICS Group has organized 500 conferences, workshops and national symposiums across the major cities including San Francisco, Las Vegas, San Antonio, Omaha, Orlando, Raleigh, Santa Clara, Chicago, Philadelphia, Baltimore, United Kingdom, Valencia, Dubai, Beijing, Hyderabad, Bengaluru and Mumbai.

Aortic coarctation in adults: The role of extra-anatomic bypass

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No conflict of interest

NOT OPERATED PATIENTS

Severe hypertension

Heart failure

Claudication pain over both legs

INDICATIONS

Aortic coarctation

Aortic recoarctation

Anastomotic pseudoaneurysm descending aorta

SURGICAL CONSIDERATIONS

Location of narrowed segment

Anatomy of narrowed segment

Collateral circulation

Concomitant procedures

SURGICAL TECHNIQUES

Conventional open procedure

Percutaneous endovascular procedure

Open extra-anatomic bypass

Conventional open procedure

Median sternotomy

Left thoracotomy

Conventional open procedure

CPB with deep hypothermia

- *Resection with direct anastomosis*
- *Patch aortoplasty*
- *Interposition tube grafts*

Risks
- *bleeding*
- *nerve injury*
- *paraplegia*
- *cerebral dysfunction*

Percutaneous endovascular procedure

Percutaneous balloon dilation and stenting

Limitations/Risks
- *calcification*
- *diffuse tubular hypoplasia*

Open extra-anatomic bypass

Median sternotomy

Left thoracotomy

Median sternotomy plus Laparotomy

Open extra-anatomic bypass

Reduced dissection of coarctation

Caution to rich collateral net

No complete clamping

No CPB or shorter CPB

Open extra-anatomic bypass

Minimal exploration of left hemithorax

Slight retraction of left lung

Risks(injuries)
- *esophagus*
- *IVC*
- *right inferior pulmonary vein*

Open extra-anatomic bypass
Median sternotomy plus Laparotomy

Infra-renal abdominal aorta

Through abdominal cavity

Retroperitoneal approach

Median sternotomy plus Laparotomy Through cavity

Shorter prosthesis

Graft enveloping

Kinking/Deformation

Median sternotomy plus Laparotomy Retroperitoneal approach

Longer prosthesis

Reduced adhesion to organs

Making tucks to lenght

INTRATHORACIC GRAFT PLACEMENT

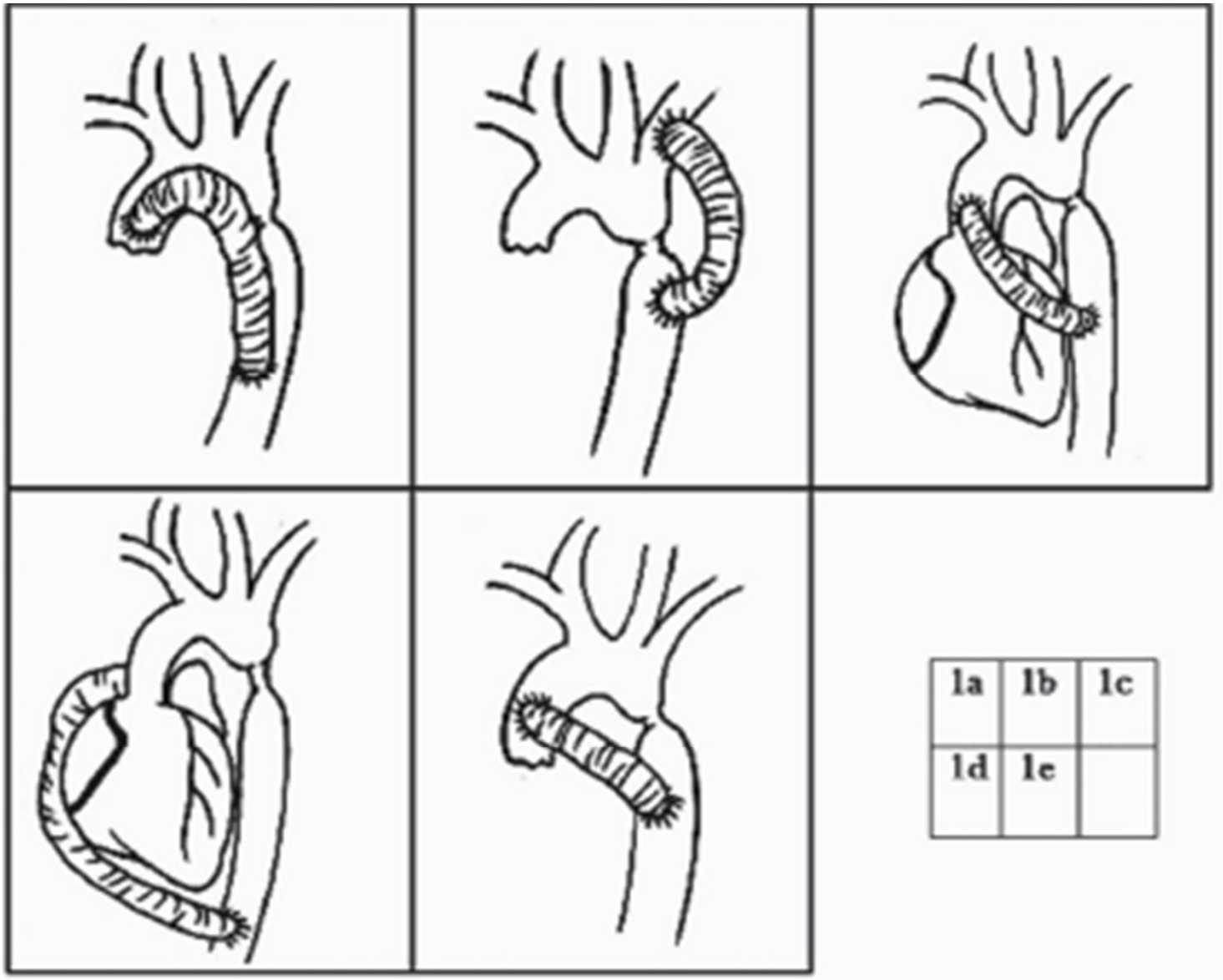


Fig. 1 – Plot of several approaches for management of aortic coarctation through extra-anatomic shunting

Carvalho MVH et al. Rev Bras Cir Cardiovasc vol.22 no.4 Oct./Dec. 2007

GRAFT PLACEMENT – LEFT THORACOTOMY

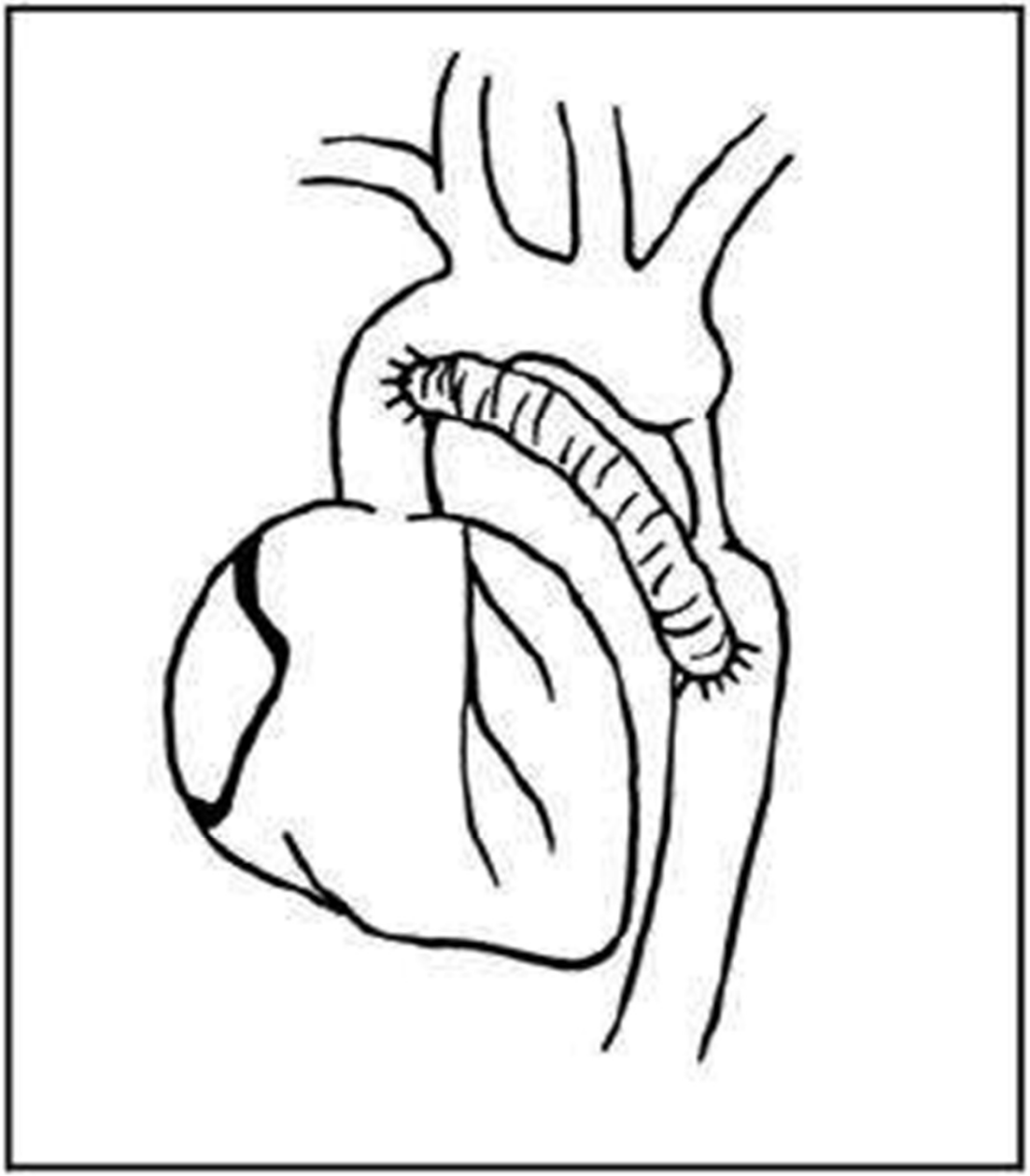
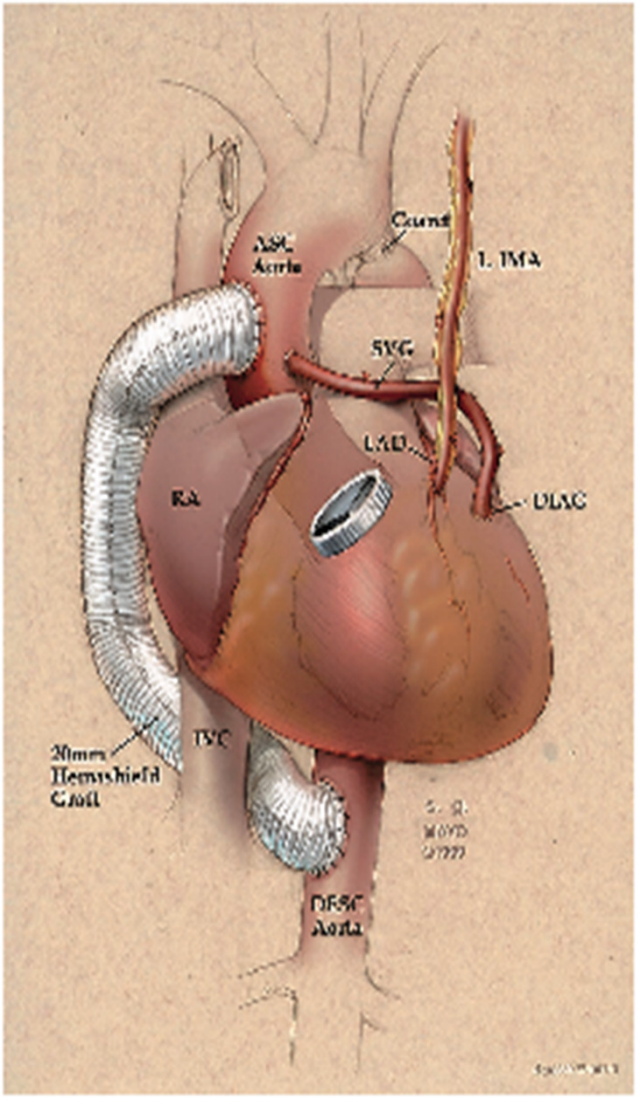
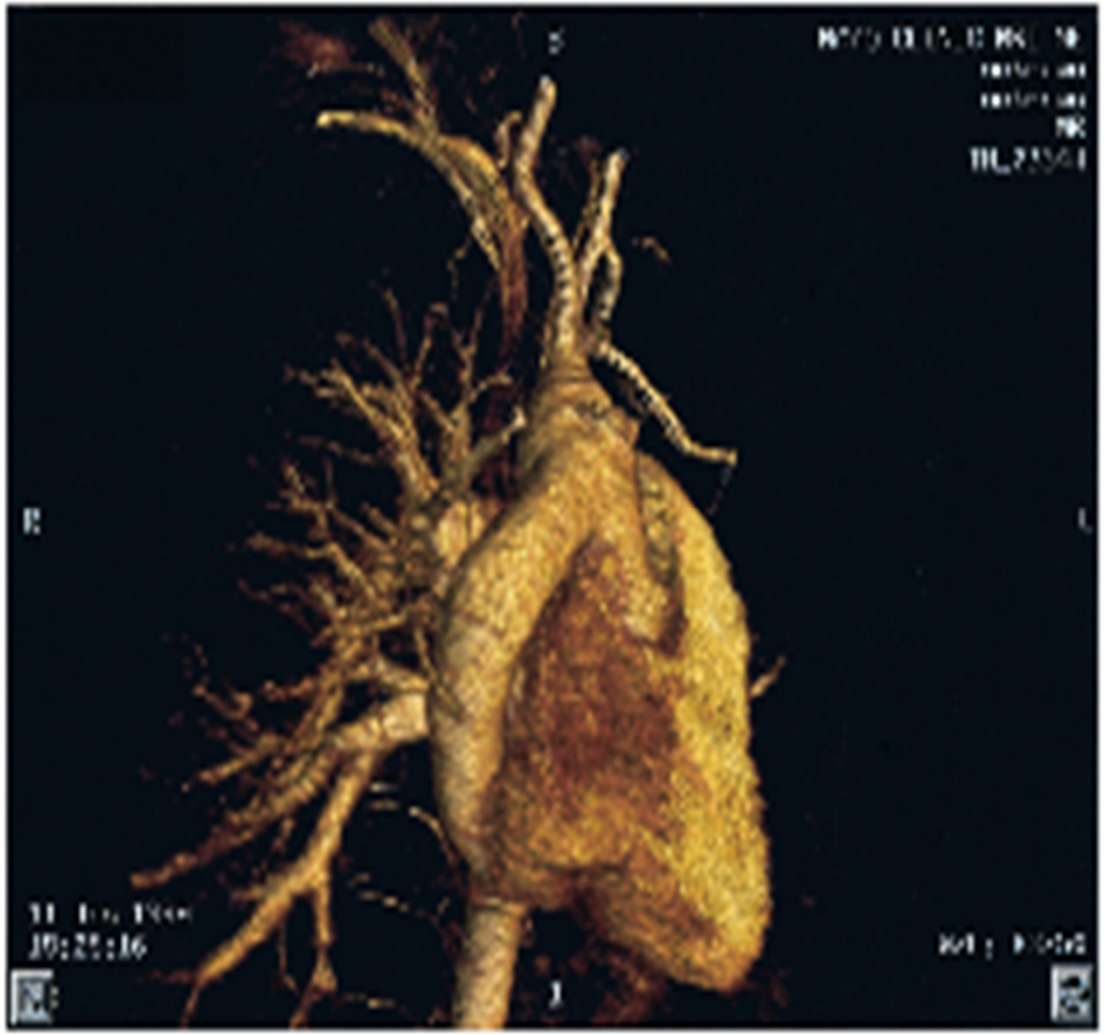


Fig. 2 – Plot of the surgery performed (left thoracotomy approach)

Carvalho MVH et al. Rev Bras Cir Cardiovasc vol.22 no.4 Oct./Dec. 2007

CONCOMITANT PROCEDURES

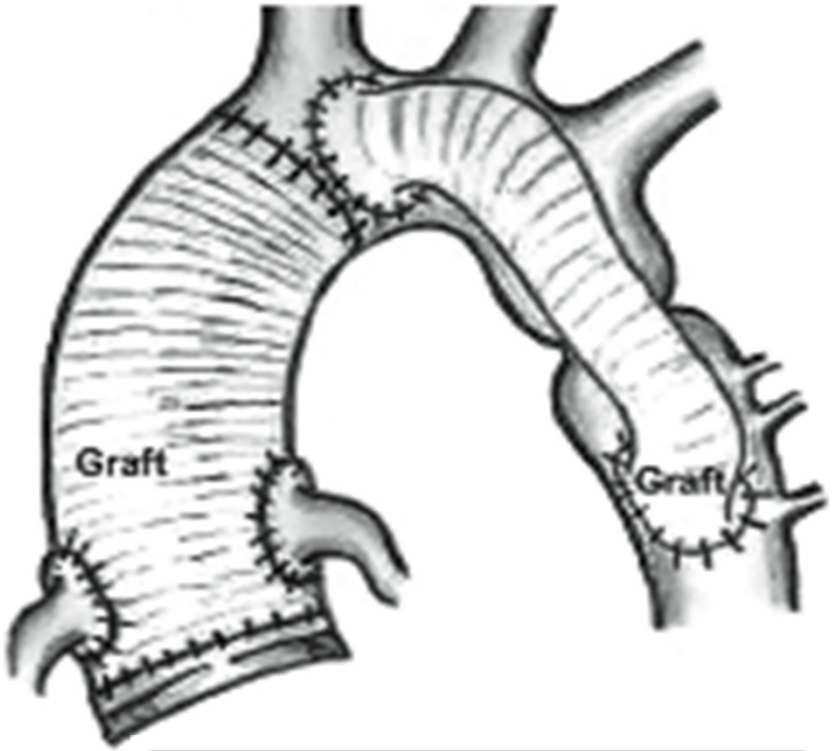


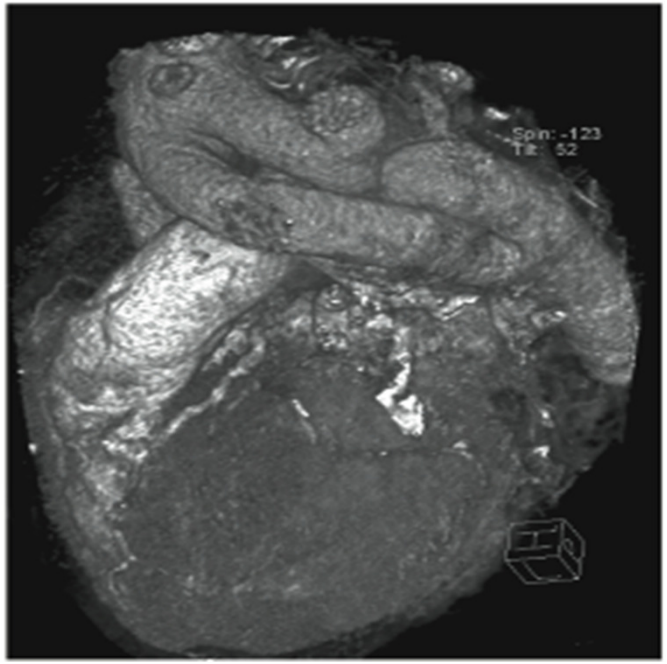


Connolly et al. Circulation. 2001;104[suppl 1]:I-133-I-137

CONCOMITANT PROCEDURES

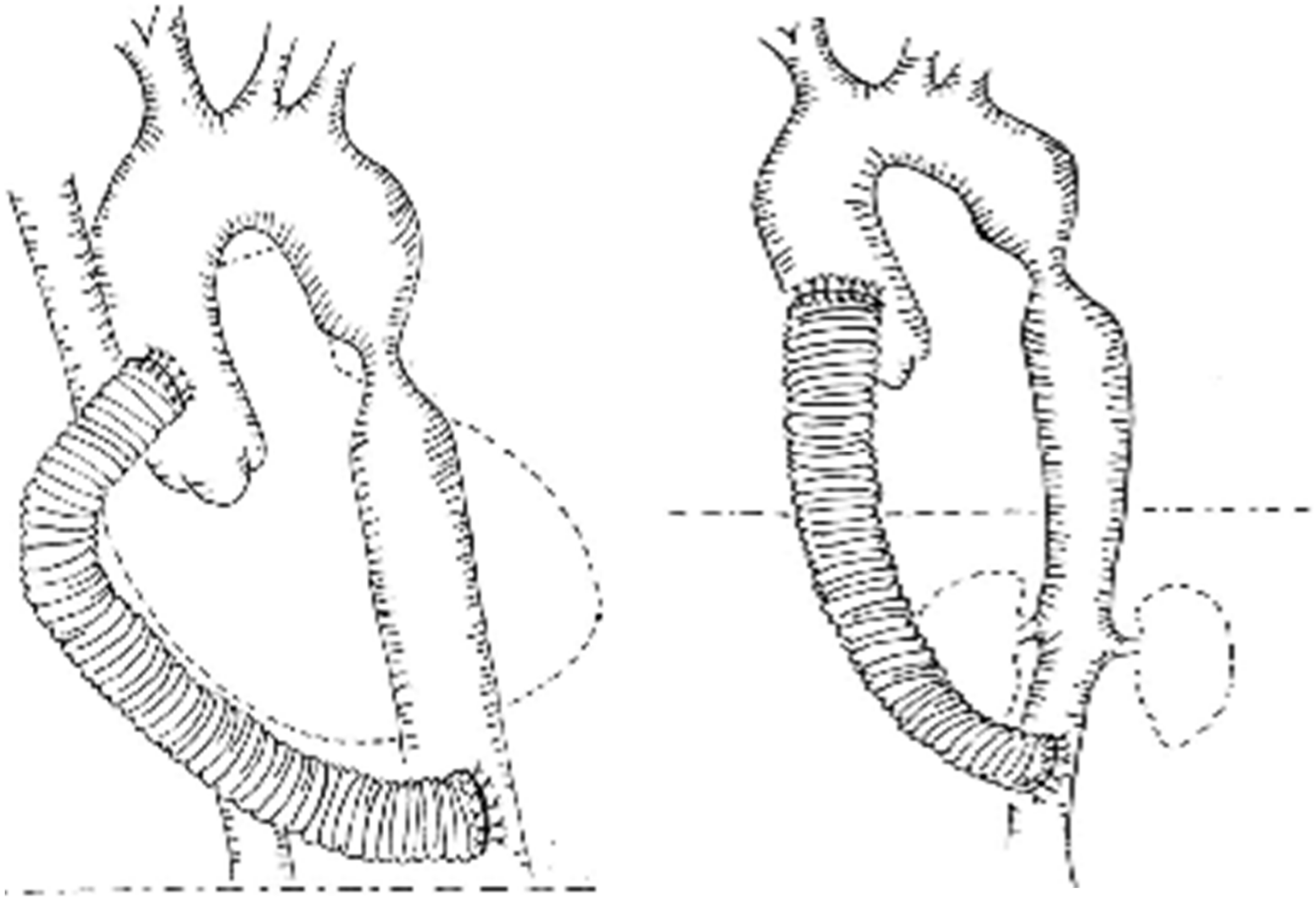






Korkmaz et al. Tex Heart Inst J 2011;38(4):404-8

HOW TO PREVENT GRAFT KINKING



Ren Wang et al. J Vasc Surg 2010;51:1203-8

HOW TO PREVENT GRAFT KINKING







Raju et al. Indian J Thorac Cardiovasc Surg (October–December 2011) 27(4):185–187

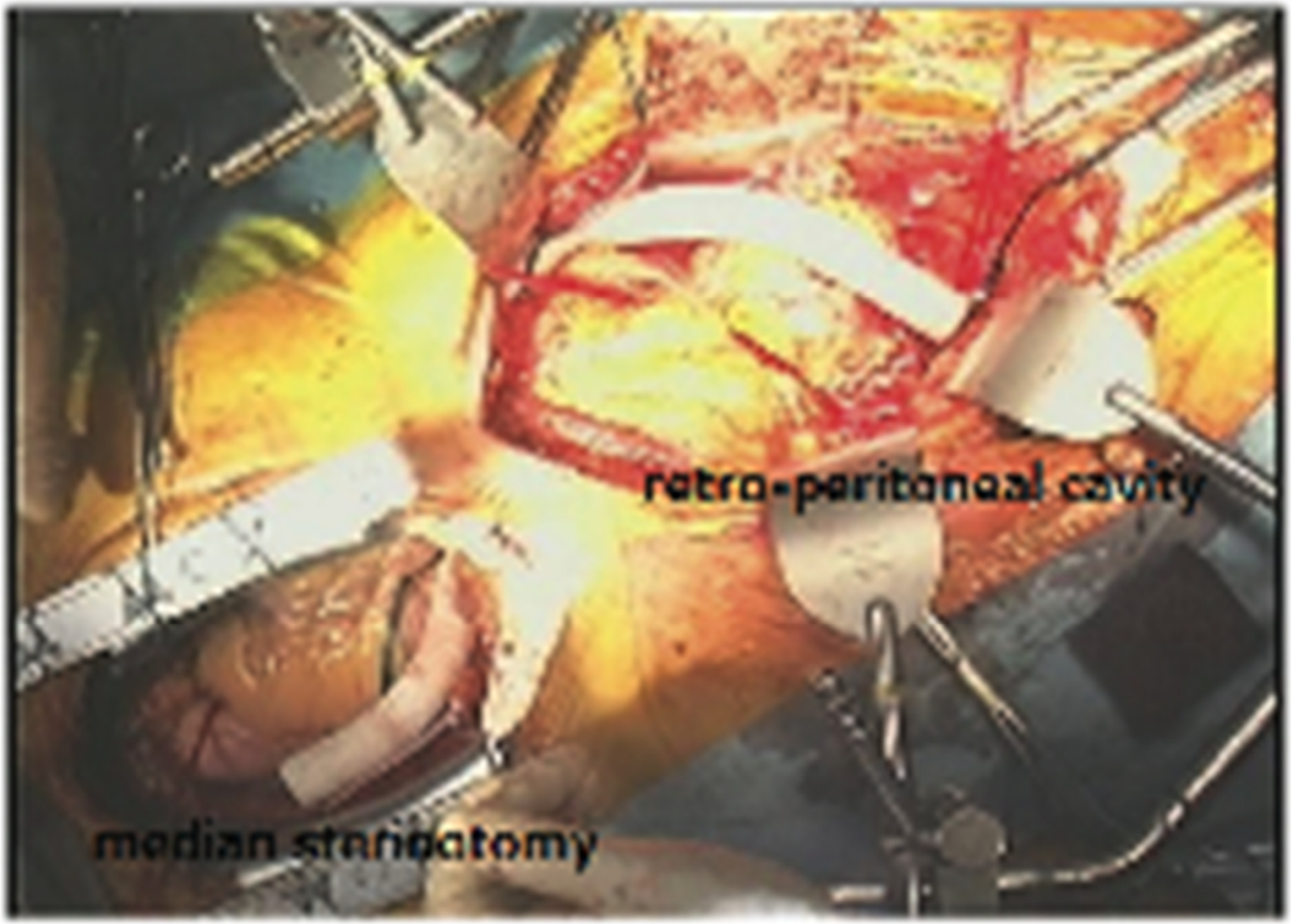
HOW TO PREVENT GRAFT KINKING





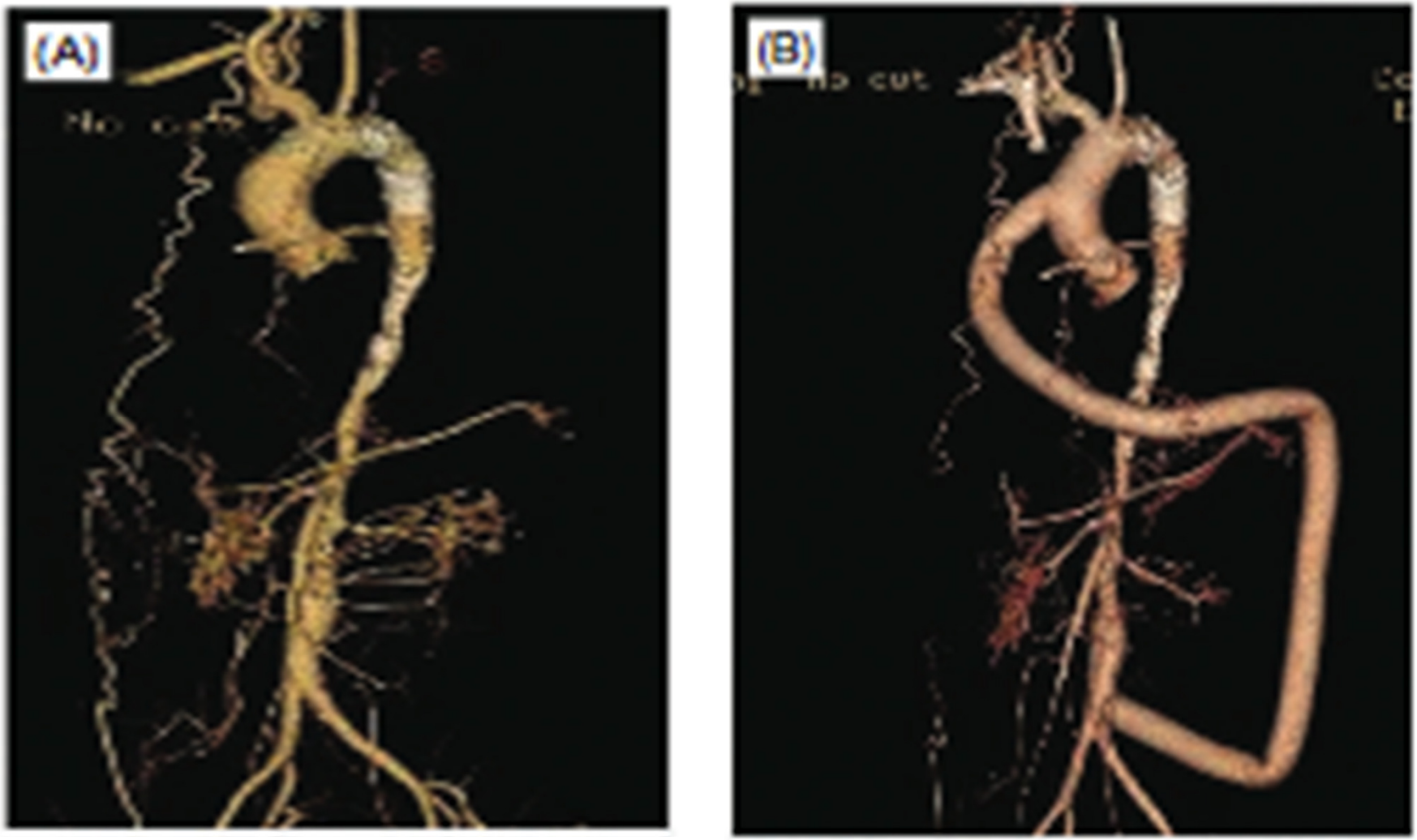
Malaj et al. Hindawi Publishing Corporation Case Reports in Vascular Medicine Volume 2013, Article ID 320132, 3 pages

HOW TO PREVENT GRAFT KINKING



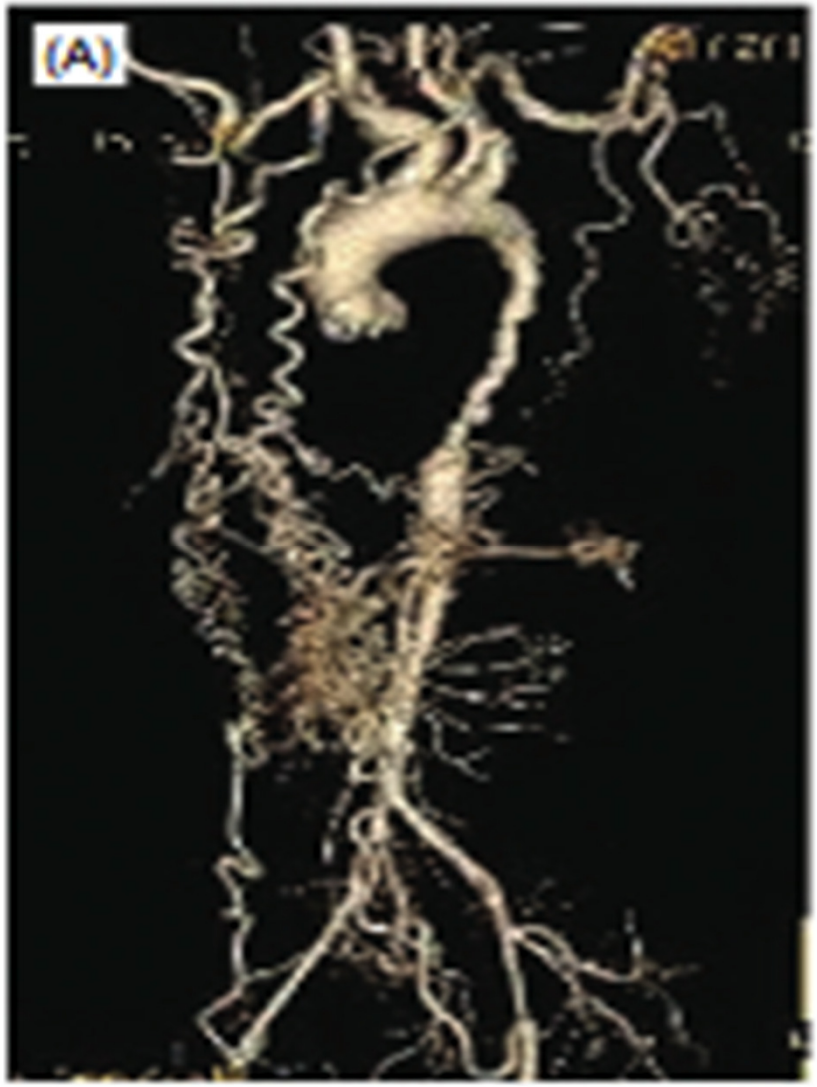
Terada et al. Ann Vasc Dis Vol. 7, No. 3; 2014; pp 354–358

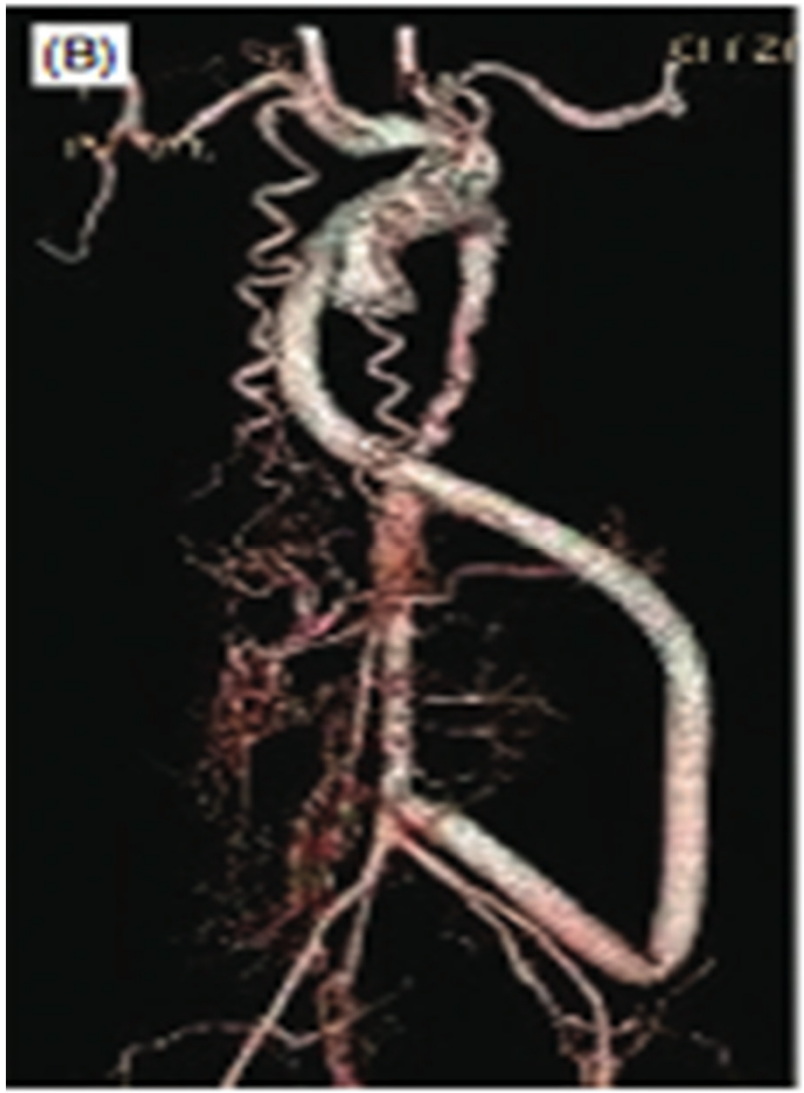
IMPACT ON COLLATERAL CIRCULATION



Terada et al. Ann Vasc Dis Vol. 7, No. 3; 2014; pp 354–358

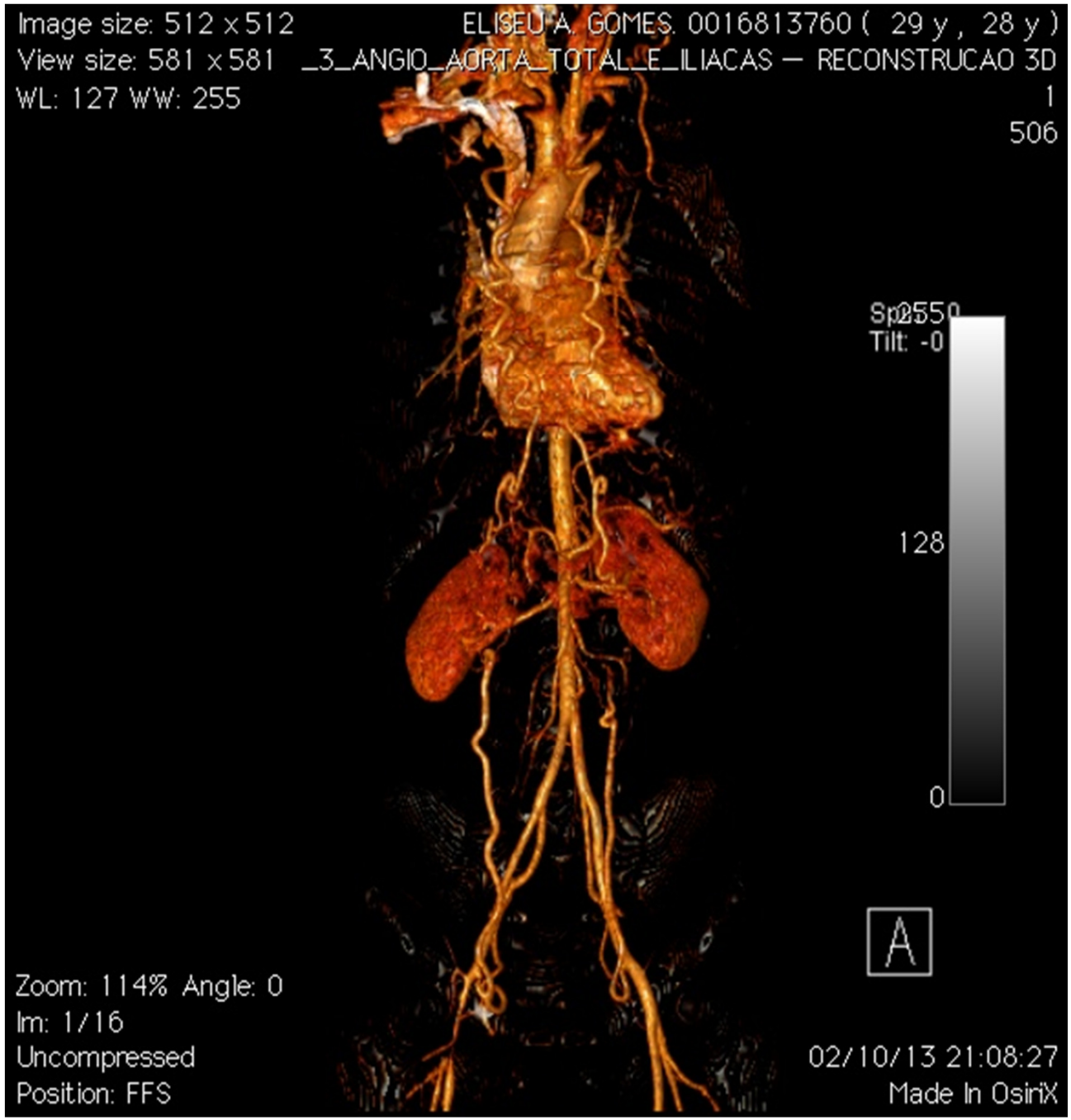
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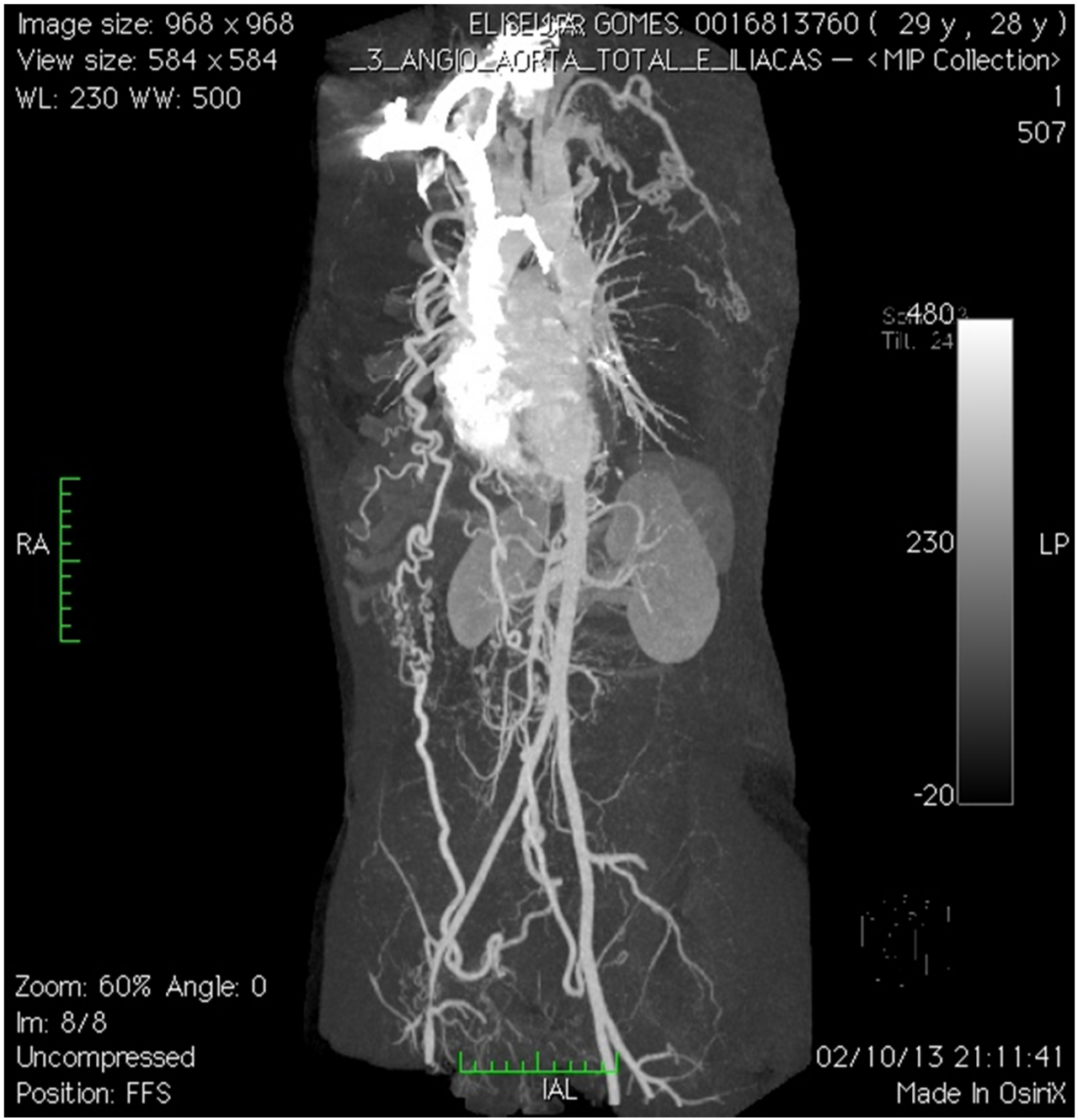


Terada et al. Ann Vasc Dis Vol. 7, No. 3; 2014; pp 354–358

SEVERE AORTIC COARCTATION
AORTIC INTERRUPTION



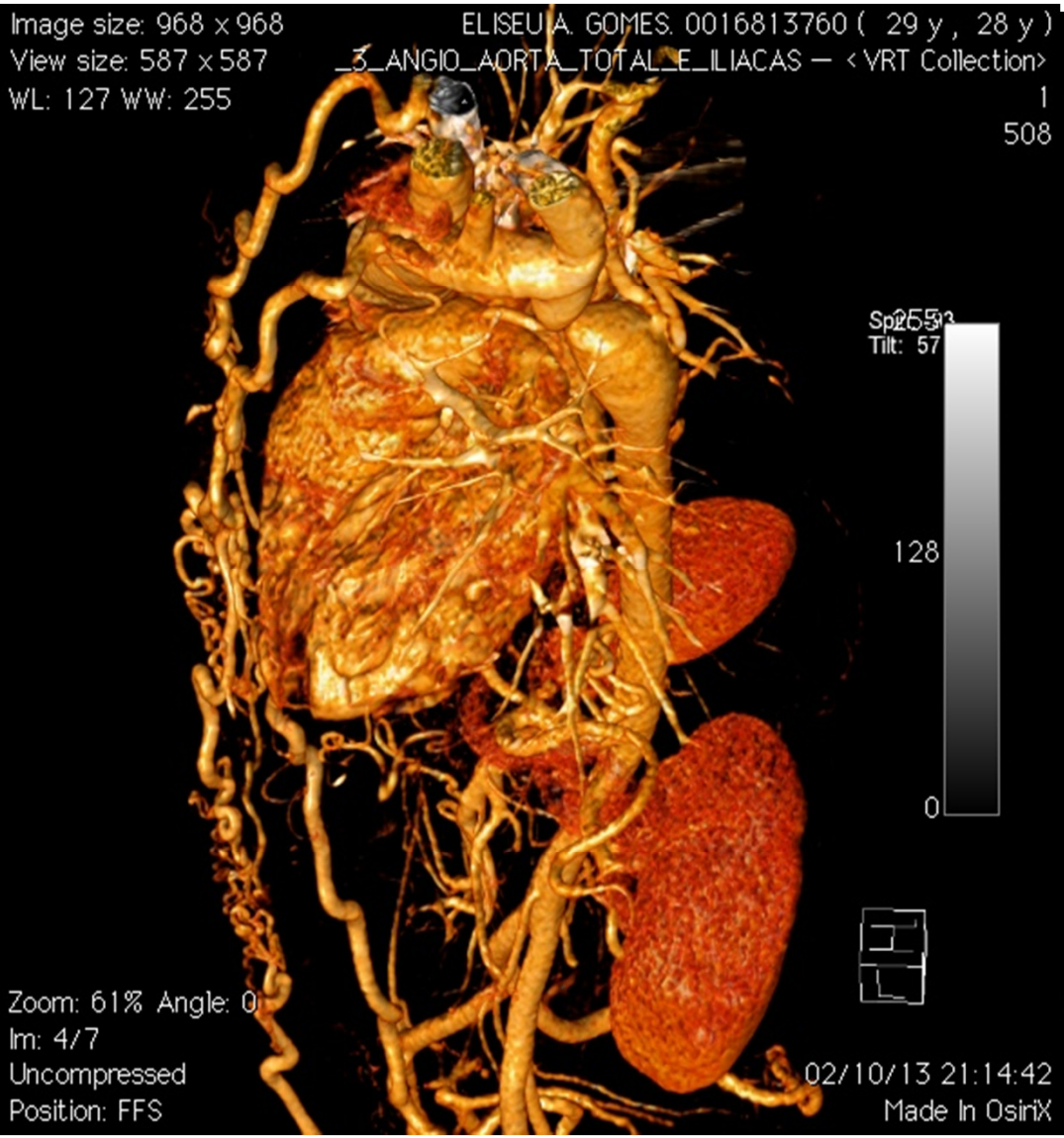
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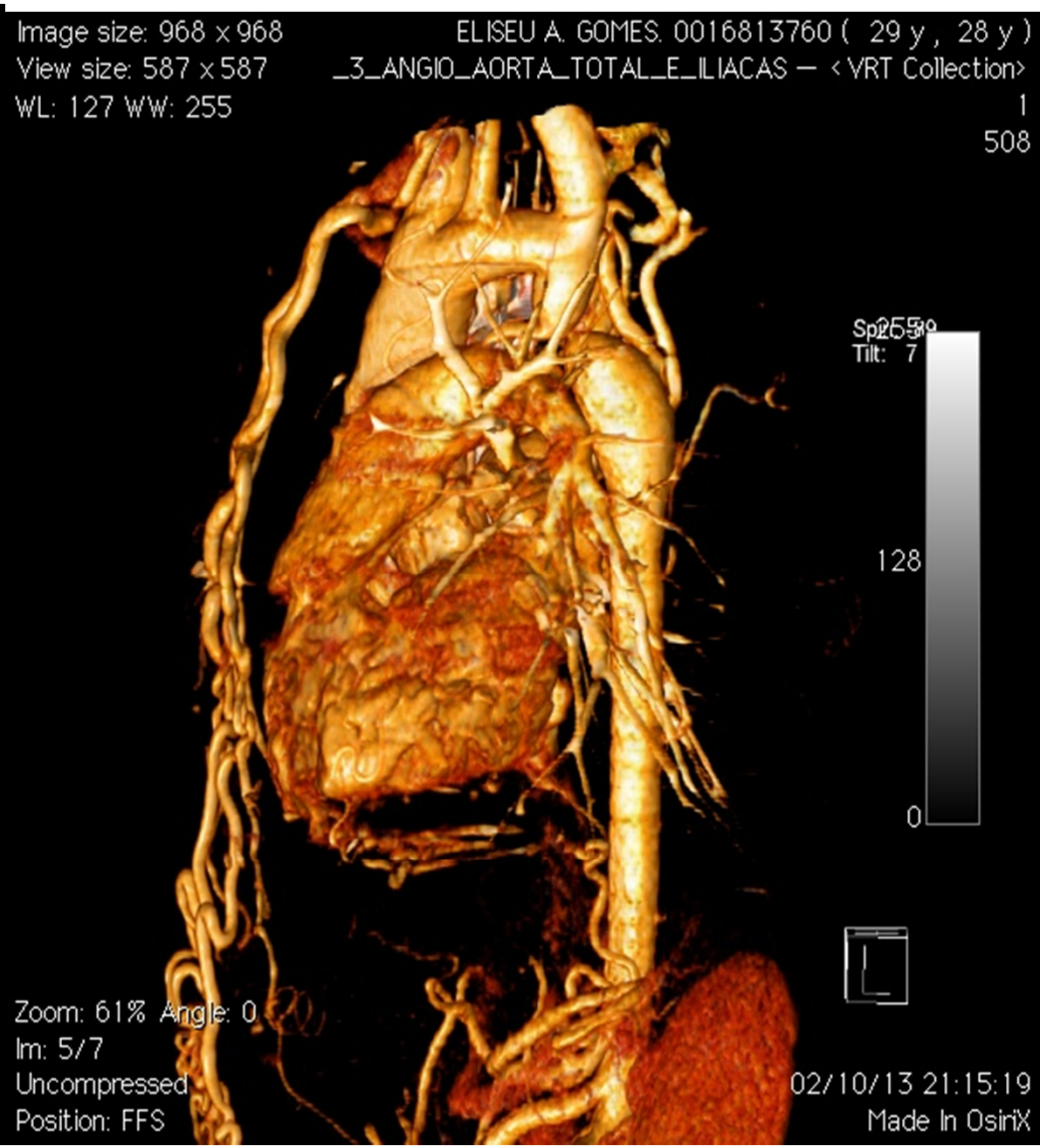


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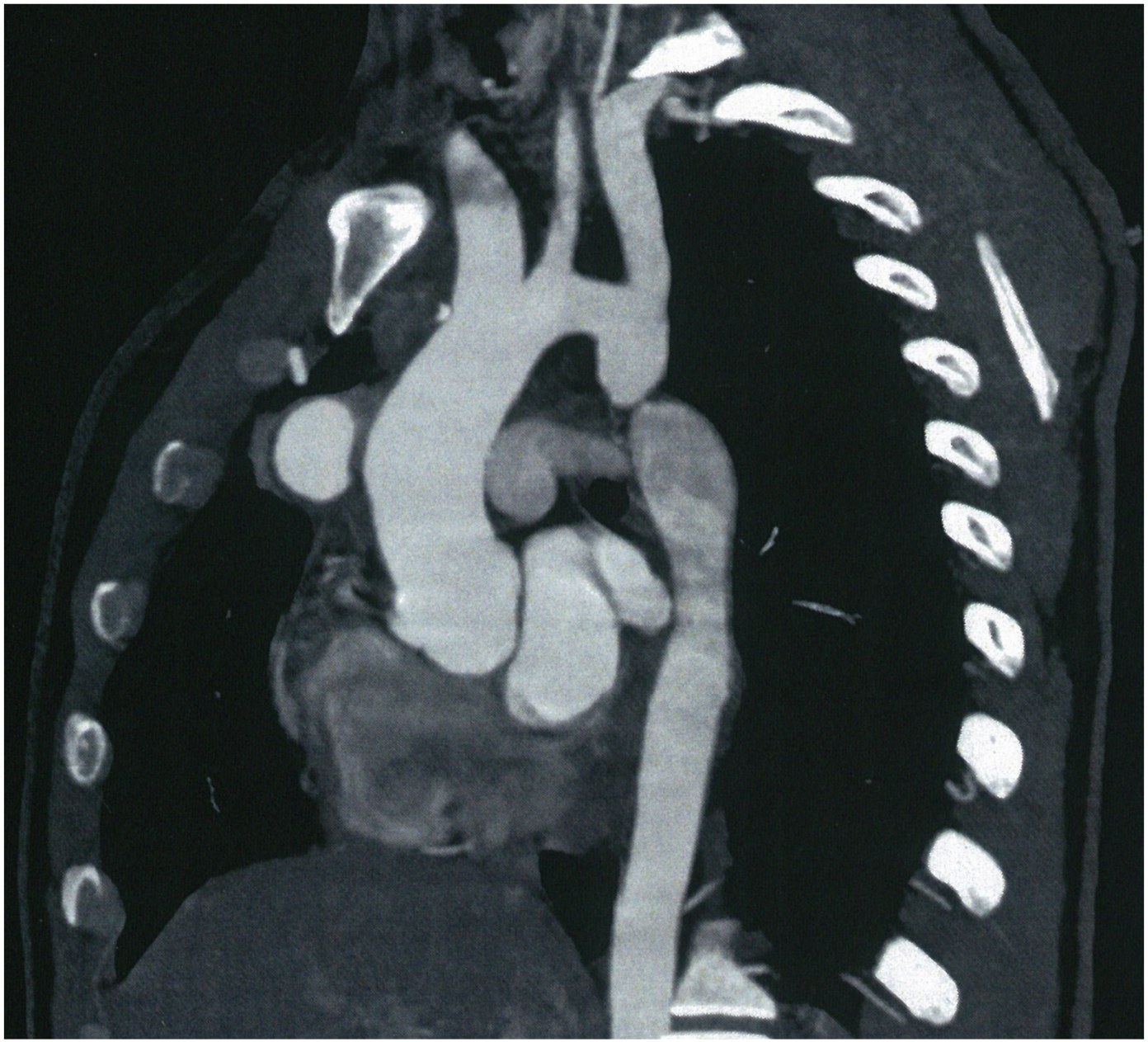


SEVERE AORTIC COARCTATION
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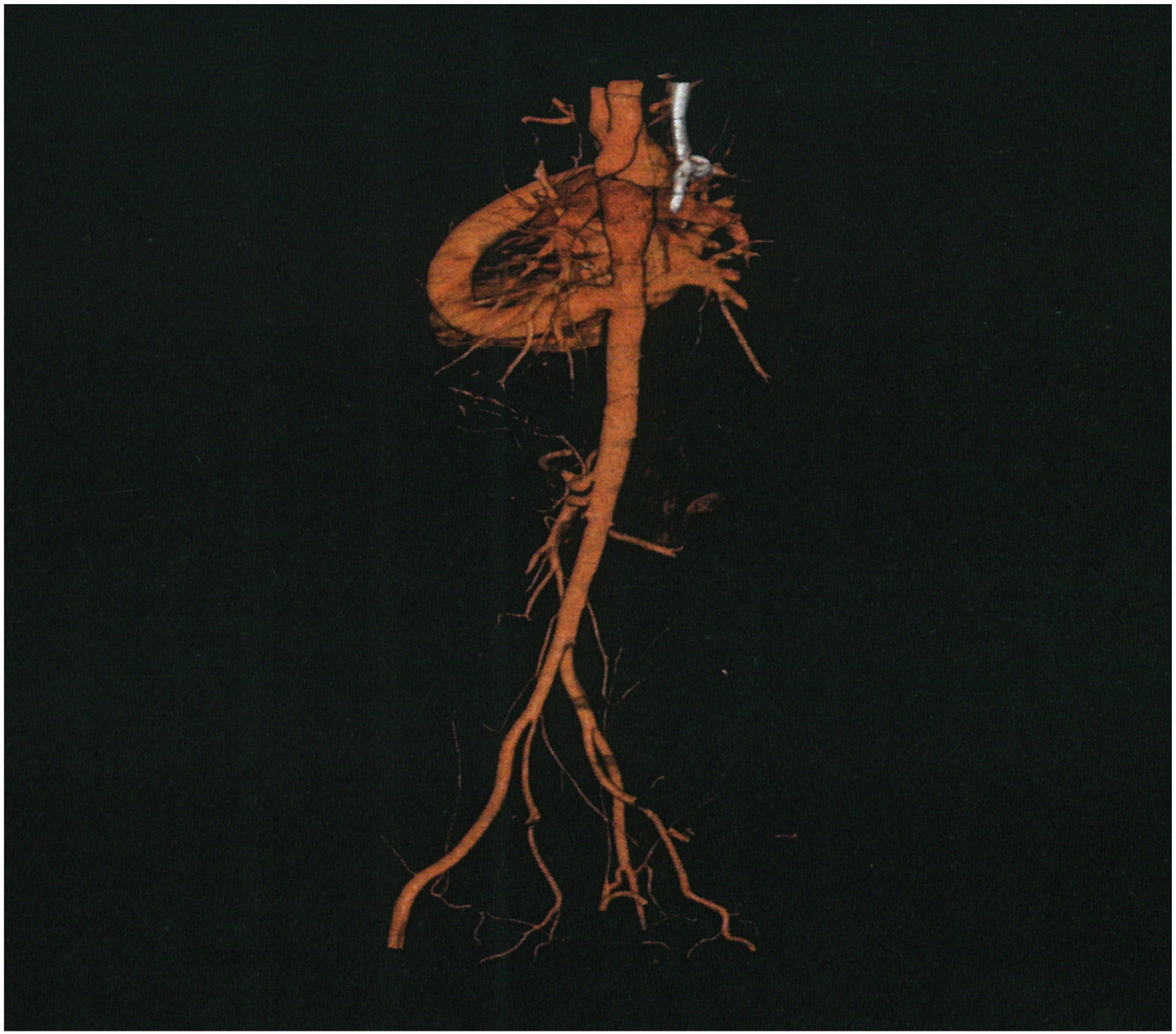
POSTOP
SEVERE AORTIC COARCTATION
AORTIC INTERRUPTION



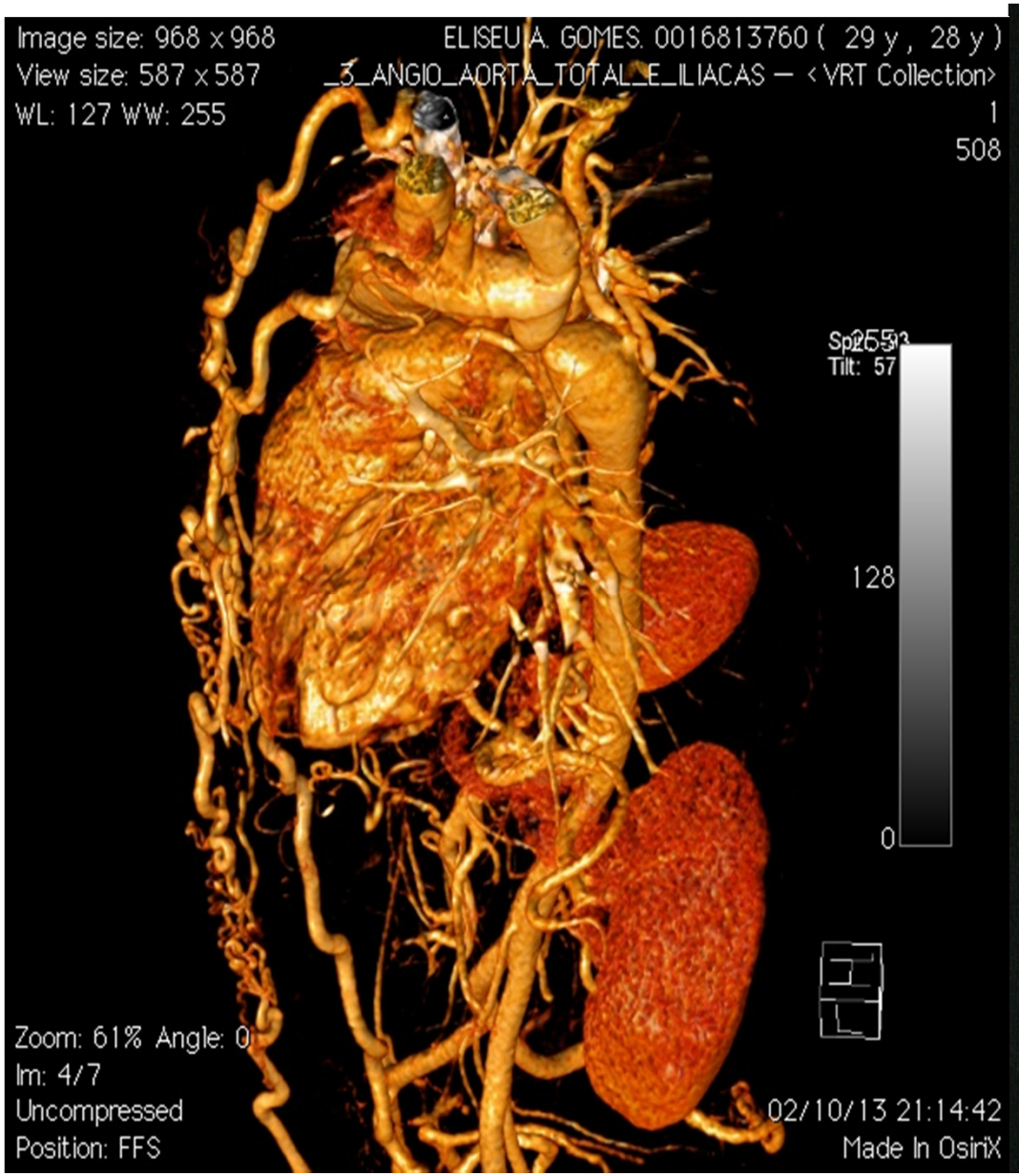
POSTOP
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AORTIC INTERRUPTION



POSTOP
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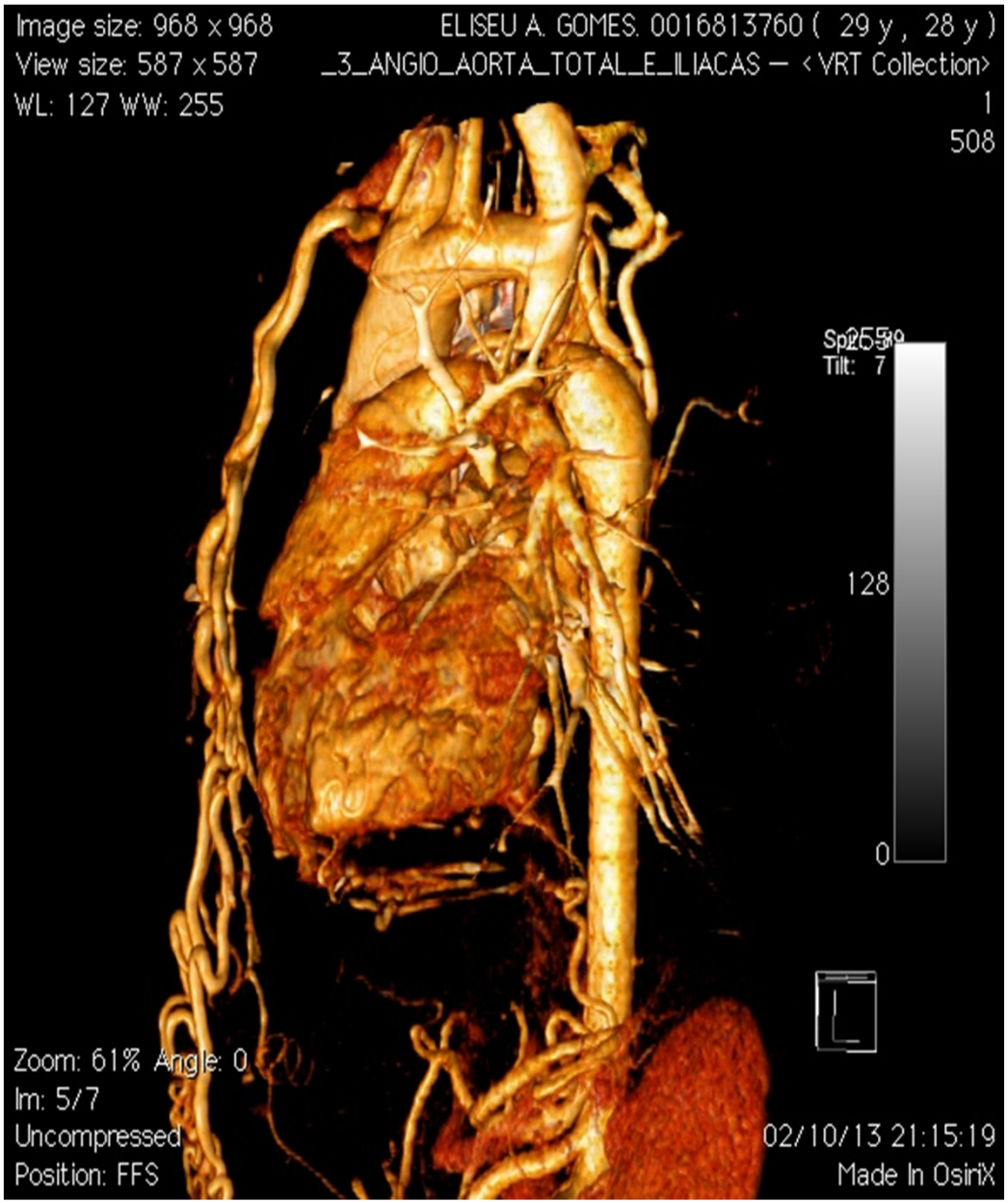


POSTOP
SEVERE AORTIC COARCTATION
AORTIC INTERRUPTION





POSTOP
SEVERE AORTIC COARCTATION
AORTIC INTERRUPTION





Open extra-anatomic bypass
Conclusions

Get away from "critical zone"
Reduced inflammatory impact
Regression of collateral circulation
Alleviation of clinical manisfestations
Progressive medicine discontinuation
Reduced morbidity and mortality

THANKS

Thanks' for your kind attention!!!!!!



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